REMARKS

The comments of the applicant below are each preceded by related comments of the examiner (in small, bold type).

Claims 1-11, 13-29 and 37-46 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to claims 1 and 27 the phrase "providing a food product that has a stable consistency and is in a flowing state" is rejected since it is unclear if the food product has a stable consistency with respect to the consistency throughout being the same, i.e. pudding prior to printing, if the phrase is with respect to the food product which has a stable consistency with respect to the consistency throughout being the same after printing as a result of reducing flowing, if the phrase is with respect to the consistency being stable as a result of a single material, i.e. no inclusions such as nuts, chips, or if the phrase is with respect to a food product which regardless of processing parameters, maintains or only has a single or "stable consistency".

Without conceding the examiner's position, amendments have been made.

The phrase "at room temperature" in claims 14 and 17 is rejected, as it is a relative term, which renders the claim indefinite. The term "at room temperature" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. It is unclear as to what is encompassed by the phrase "at room temperature"; it is unclear as to what degree of difference is encompassed by this phrase, since a walk-in freezer would have one room temperature which is different from the room temperature of a heated environment.

Without conceding the examiner's position, amendments have been made.

The phrase "flash freezer" in claim 46 is rejected, since it is unclear what would constitute a "flash freezer" i.e. with respect to a specific type of freezing such cryogenic, or if the phrase is with respect to a desired amount of time the freezing takes place in. Thus the phrase "flash freezer" is further rejected since the phrase is a relative term, which renders the claim indefinite. The term "flash freezer" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. It is unclear as to what is encompassed by the phrase "flash freezer"; it is unclear as to what degree of difference is encompassed by this phrase, if not a "flash freezer".

Without conceding the examiner's position, amendments have been made.

Claims 1-3, 6-7, 9- 11, 13-27 and 37-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shastry et al. (WO 20041003089) in view of Shastry et al. (7029112).

Shastry et al. teaches providing a food product that has a stable consistently (par. 0019, par. 0056) and is in a flowing state, such as "puddings" and "creams",

Claim 1 has been amended to recite that the media is ejected onto the surface of the food product when the food product both (a) is in a stable state such that the predetermined pattern on the surface will be maintained for a period of at least 10 minutes, and (b) has a gravity flowability of 50% or more in 24 hours or less. The cited portions of Shastry listed edible substrates but said nothing about the stability of the state of any of them at the time of printing let alone about the gravity flowability of any of them at that time.

in addition to Shastry et al. teaching "almost any edible surface to be printed" (par. 0056) including ice cream which melts at temperatures of greater than 32F.

The question with respect to claim 1 is not what kinds of edible surfaces can be printed on but rather what are the stabilities of their states and their gravity flowabilities at the time of printing. The cited portions of Shastry said nothing about that. The applicant does not dispute that ice cream melts. But that is irrelevant to the features of claim 1. With respect to claim 1, the question is what was the state of the ice cream in Shastry at the time of printing. The cited portions of Shastry said nothing at all about that.

Shastry et al. further teaches providing a piezoelectric inkjet printer (par. 0017) capable of ejecting a series of drops for deposition on a flowing substrate, in a predetermined pattern (par. 00 17) and ejecting the jettable media on a surface of the food product while the food product is in a flowing state (par. 0017, par. 0019),

The applicant respectfully disagrees. Paragraph 17 said nothing about the flowability state of a food product at the time of printing. Although paragraph 19 did recite a list of edible substrates, it, too, said nothing about the flowability of the substrates at the time of printing.

and "reducing diffusion of the jettable media in the food product" since Shastry et al. teach ink which solidifies upon contact with the food substrate, in addition to teaching that the image is at a resolution of 50 dpi or more (par. 0054).

...

Shastry (7029112) teaches ink-jet printing on surface modified edibles which may be soft thus more amenable to printing (par. 0012).

Paragraph 0012 of Shastry neither described nor would have made it obvious to print on a food product that, at the time of printing, both (a) is in a stable state such that the predetermined

pattern on the surface will be maintained for a period of at least 10 minutes, and (b) has a gravity flowability of 50% or more in 24 hours or less. Paragraph 0012 mentioned soft panned sugar shelled confectionery, but neither described nor would have made obvious either the stability state or the gravity flowability at the time of printing. That paragraph said nothing about those features of claim 1.

> **More specifically Shastry teaches that the surface chemistry of the ink and the surface of the edible piece to be printed plays a role in determining the final image quality and resolution. The temperature of the substrate, or of the ink, can be modified since temperature modulation will affect the surface energy properties of the ink and edible surface, with lower temperatures lowering surface energy and reducing the tendency of an ink to spread across the surface of the edible substrate. Applying very low humidity gas or air will enhance the drying rate of the ink droplets. Optimization of these parameters would be within the skill of one having ordinary skill in the art of confectionery manufacture (par. 0041).**
>
> **Thus since both teach ink-jet printing on soft surfaces, since both recognize providing optimal characteristics such as surface tension so that the media will not run or bleed with respect to the flowable surface (par. 0049), one or ordinary skill in the art would have been motivated to combine the teachings and taught reducing the flowing of the food product since Shastry (7029112) teaches that lower temperatures lowers surface energy and reduces the tendency of an ink to spread across the surface of the edible substrate (par. 0041) and since the optimization of these parameters would be within the skill of one having ordinary skill in the art of confectionery manufacture as is further taught by Shastry (7029112, par. 0041).**

The applicant again respectfully disagrees. In the applicant's amended claim 1, the features that refer to the stability state and to the gravity flowability are features of the food product that bears the surface; those features do not refer to the surface of the food product. What paragraph 0041 of Shastry, described, by contrast, was "the surface chemistry of the... surface of the edible piece," "the drying of ink droplets on the surface of the edible piece," "the surface energy properties of the... edible surface" and the tendency of an ink to spread across the surface" (emphasis added). Thus, the optimization of parameters mentioned by Shastry related only to parameters associated with the surface of the edible piece, not the edible piece that bore the surface. Shastry's paragraph 0041 said nothing about the stability state or the gravity flowability of the food product that bore the surface on which the printing was to be done.

> **Therefore, although Shastry et al. ('3089) is silent to reducing the flowing of the food product, or freezing the product such that the media on the food has a lateral image bleed of about 10% or less after 30 minutes, Shastry et al. does teach printing of consumer products such as pudding, creams and ice cream (par. 00 17). Thus it would have been obvious to one of ordinary skill in the art at the time of the invention by the applicant to teach reducing the flowing of the product after printing, in the instant case by lowering the temperature of the surface as taught by '112, with respect to flowing products such as puddings and creams, since lower temperatures lowers surface energy and reduces the tendency of an ink to spread**

across the surface of the edible substrate (par. 0041) and since the optimization of these parameters would be within the skill of one having ordinary skill in the art of confectionery manufacture as is further taught by Shastry (7029112, par. 004 1) thus preventing the media from "running" or "bleeding" as is further taught by ' 112.

With respect to ice cream which is taught by '3089, since lower temperatures lowers surface energy and reduces the tendency of an ink to spread across the surface of the edible substrate (par. 0041) as taught by ' 112 and since the optimization of these parameters would be within the skill of one having ordinary skill in the art of confectionery manufacture as is further taught by Shastry (7029 1 12, par. 004 1) and further since keeping the ice cream from melting flows logically thus yielding predictable results to one of ordinary skill in the art at the time of the invention. It would have further been obvious to teach reducing flowing of the food product by lower the temperature of the surface as taught by '1 12 in order to ensure that the desired image resolution is achieved as is desired by both ' 112 and '3089 and maintained due to solidifying the edible thereby maintaining the resolution of the image thus preventing the ice cream from melting which would cause the ink to "run" or "bleed".

Claim 27 is patentable for at least similar reasons as claim 1. All of the dependent claims are patentable for at least similar reasons as those for the claims on which they depend are patentable.

Canceled claims, if any, have been canceled without prejudice or disclaimer.

Any circumstance in which the applicant has (a) addressed certain comments of the examiner does not mean that the applicant concedes other comments of the examiner, (b) made arguments for the patentability of some claims does not mean that there are not other good reasons for patentability of those claims and other claims, or (c) amended or canceled a claim does not mean that the applicant concedes any of the examiner's positions with respect to that claim or other claims.

The required extension fees in the amount of $1110 are being paid concurrently on the Electronic Filing System (EFS) by way of Deposit Account authorization. Please apply any other charges or credits to deposit account 06-1050, referencing attorney docket 09991-0133001.

Respectfully submitted,

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